

Computer Networks

- [Computer Network Notes](#)

Lab 1:

- Activation of accounts: University email, eduroam, Microsoft 365
- Join Class in Microsoft Teams

Cisco Packet Tracker

- **Lab 1:** Installation of Cisco Packet Tracker
- **Lab 2:** Basic Networking Concepts
 - Overview of computer networks, protocols, and topologies.
 - [Hands-on activity](#): Identify star of network topology using network simulation tools (cisco packet tracer)
- **Lab 3:** [How to configure DHCP server in Packet Tracer](#)

Wireshare

- **Lab 1:** Installation Wireshark and understanding of Interface
 - [Download Wireshark](#)
- **Lab 2:** Use of Wireshark
 - [Slide](#)
 - [Hands-on activity](#)

Windows

- **Lab 1:** [Windows Networking Commands](#)
 - Hands-on activity: [ping](#), [ipconfig](#)

Lab 2: [Windows Networking Commands](#) - Hands-on activity: [nslookup](#), [tracert](#)

Lab 3: [Finding Your Public IP Address](#)

- **Lab 4:** Understanding Network Devices
 - Introduction to routers, switches, hubs, and modems.
 - [Hands-on activity](#): Configure basic settings on a router and switch using cisco packet tracker

Final Project: Project #1

Explain the purpose of the following Windows networking commands and provide examples of their

usage:

a) ipconfig b) ping c) tracert

What is a packet sniffer? Explain its purpose and provide an example of a packet-sniffing tool.

Configure a DHCP server in Packet Tracer to automatically assign IP addresses to PCs in a LAN?

Configure a router to connect two LANs with different subnets.

Set up two LANs with distinct subnets. Configure the router interfaces with appropriate IP addresses for each subnet. Ensure that devices in each LAN can communicate with the router and with devices in the other LAN.

Create two VLANs in Packet Tracer: VLAN 10 for Sales and VLAN 20 for Engineering.

Connect two PCs to the switch for each VLAN. Assign each PC to the appropriate VLAN. Configure IP addresses for the PCs to enable communication within their respective VLANs while preventing communication between VLANs (without routing).